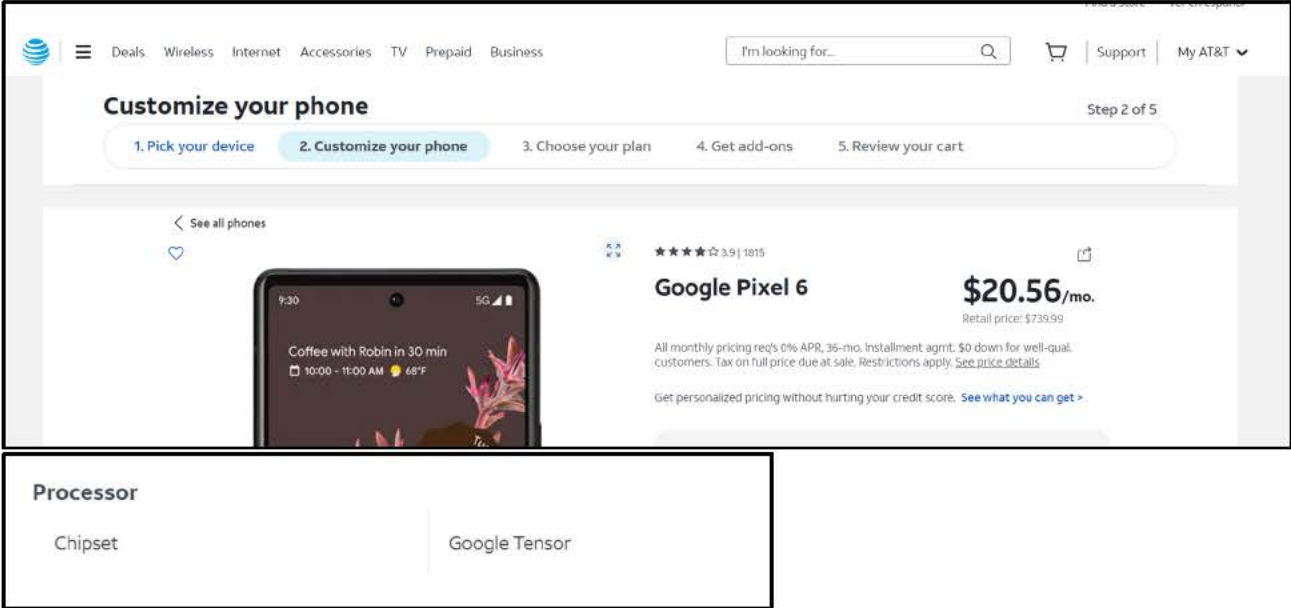


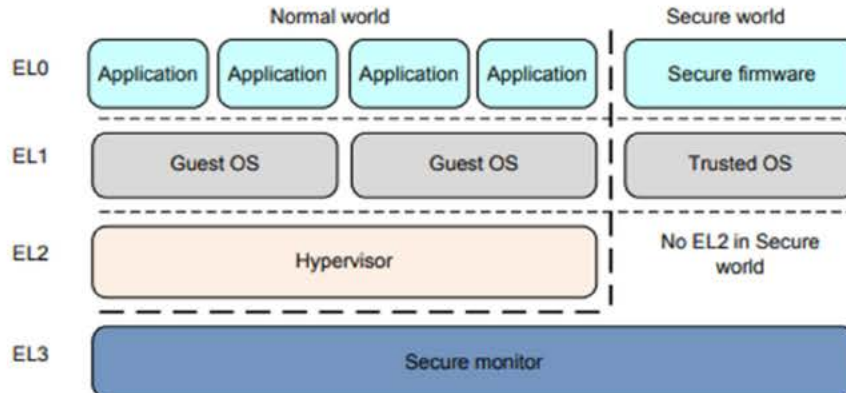
# **EXHIBIT 19**

**US Patent No. 7,930,539**

Claim 1	Identification
<p>[1pre] A computer-implemented method for use in a computer system including a plurality of resources, the method comprising steps of:</p>	<p>To the extent the preamble is limiting, the Google Pixel 6 uses an ARMv8-A based processor that implements a method for use in a computer system including a plurality of resources comprising the steps below.</p>
	<div></div>
	<p>The Motorola razr+ includes the Google Tensor mobile platform processor, which uses an ARM Cortex-A55 CPU.</p>

Claim 1	Identification														
	<table border="1"> <thead> <tr> <th data-bbox="667 285 886 415"></th><th data-bbox="886 285 1222 415">Google Tensor (2021)</th></tr> </thead> <tbody> <tr> <td data-bbox="667 415 886 743">CPU</td><td data-bbox="886 415 1222 743">           2x Arm Cortex-X1 (2.80GHz)            2x Arm Cortex-A76 (2.25GHz)            4x Arm Cortex-A55 (1.80GHz)         </td></tr> <tr> <td data-bbox="667 743 886 886">GPU</td><td data-bbox="886 743 1222 886">Arm Mali-G78 MP20</td></tr> <tr> <td data-bbox="667 886 886 977">RAM</td><td data-bbox="886 886 1222 977">LPDDR5</td></tr> <tr> <td data-bbox="667 977 886 1114">ML</td><td data-bbox="886 977 1222 1114">Tensor Processing Unit</td></tr> <tr> <td data-bbox="667 1114 886 1256">Media Decode</td><td data-bbox="886 1114 1222 1256">H.264, H.265, VP9, AV1</td></tr> <tr> <td data-bbox="667 1256 886 1295"></td><td data-bbox="886 1256 1222 1295"></td></tr> </tbody> </table> <p data-bbox="592 1302 1348 1334"><a href="https://www.androidauthority.com/google-tensor-3060818/">https://www.androidauthority.com/google-tensor-3060818/</a></p>		Google Tensor (2021)	CPU	2x Arm Cortex-X1 (2.80GHz) 2x Arm Cortex-A76 (2.25GHz) 4x Arm Cortex-A55 (1.80GHz)	GPU	Arm Mali-G78 MP20	RAM	LPDDR5	ML	Tensor Processing Unit	Media Decode	H.264, H.265, VP9, AV1		
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Claim 1	Identification
	<div data-bbox="596 334 1919 456" style="border: 1px solid black; padding: 5px;"> <p>The Cortex-A55 core is a mid-range, low-power core that implements the ARMv8-A architecture with support for the v8.2 extension, the RAS extension, the Load acquire (LDAPR) instructions introduced in the ARMv8.3 extension, and the Dot Product instructions introduced in the ARMv8.4 extension.</p> </div> <p>ARM® Cortex®-A55 Core, Revision r1p0, Technical Reference Manual</p> <div data-bbox="596 570 1470 764" style="border: 1px solid black; padding: 5px;"> <p><b>I Security in an ARMv8-A system</b></p> <p>A secure or trusted system is one that protects assets, for example passwords or credit card details from a range of plausible attacks, to prevent them from being copied or damaged, or made unavailable.</p> <p>Security is defined by the principles of:</p> </div> <p>Security in an ARMv8-A System (<a href="https://developer.arm.com/documentation/100935/0100/Security-in-ARMv8-A-systems-?lang=en">https://developer.arm.com/documentation/100935/0100/Security-in-ARMv8-A-systems-?lang=en</a>)</p>
[1] (A) receiving a request from a software program to access a specified one of the plurality of resources;	The system receives a request from a software program (such as a software application or OS) to access a resource, such as a normal world resource or a secure world resource.

Claim 1	Identification
	 <p data-bbox="966 714 1365 738"><b>Figure 1 Security model for AArch64</b></p> <p data-bbox="598 771 1732 958">The ARM Architecture Reference Manual uses the terms Secure and Non-secure to refer to system security states. A Non-secure state does not automatically mean security vulnerability, but rather normal operation and is therefore the same as the Normal world. Typically, there is a master and slave relationship between Non-secure and Secure worlds. Code in the Secure world is only executed when the OS permits Secure world execution through a mechanism that is initiated by the Secure Monitor Call (SMC) instruction.</p> <p data-bbox="598 974 1071 998">Security in an ARMv8-A System at 5</p>
[1] (B) determining whether the specified one of the plurality of resources is a protected resource;	<p data-bbox="598 1015 1953 1079">A determination is made whether the specified one of the plurality of resources is a protected resource. For example, whether the resource is in secure world or normal world.</p> <div data-bbox="598 1079 1858 1323"> <p data-bbox="609 1104 1816 1307">The ARM Security Extensions model allows system developers to partition device hardware and software resources, so that they exist in either the Secure world for the security subsystem, or the Normal world for everything else. Correct system design can ensure that no Secure world assets can be accessed from the Normal world. A Secure design places all sensitive resources in the Secure world, and ideally has robust software running that can protect assets against a wide range of possible software attacks.</p> </div> <p data-bbox="598 1323 1071 1347">Security in an ARMv8-A System at 5</p>



Claim 1	Identification
[1] (C) if the specified one of the plurality of resources is a protected resource, performing steps of:	If the specified one of the plurality of resources is a protected resource (e.g., in secure world), the steps below are performed.
[1(C)] (1) if the computer system is operating in a protected mode of operation, then denying the request regardless of access rights associated with the software program including software programs having a most-privileged level; and	<p>If the computer system is operating in a protected mode of operation, then the request is denied regardless of access rights associated with the software program including software programs having a most-privileged level. For example, if the Secure Monitor Disable bit is set to disable, Secure Monitor Call (SMC) instructions, required to access secure world resources, are disabled.</p> <p><b>D19.2.120 SCR_EL3, Secure Configuration Register</b></p> <p>The SCR_EL3 characteristics are:</p> <p><b>Purpose</b></p> <p>Defines the configuration of the current Security state. It specifies:</p> <ul style="list-style-type: none"> <li>• The Security state of EL0, EL1, and EL2. The Security state is Secure, Non-secure, or Realm.</li> <li>• The Execution state at lower Exception levels.</li> <li>• Whether IRQ, FIQ,SError interrupts, and External abort exceptions are taken to EL3.</li> <li>• Whether various operations are trapped to EL3.</li> </ul> <p>Arm Architecture Reference Manual for A-Profile Architecture at D19.2.29  <a href="https://developer.arm.com/documentation/ddi0487/latest/">(https://developer.arm.com/documentation/ddi0487/latest/)</a></p>

Claim 1	Identification						
	<p><b>SMD, bit [7]</b></p> <p>Secure Monitor Call disable. Disables SMC instructions at EL1 and above, from any Security state and both Execution states, reported using an ESR_ELx.EC value of 0x00.</p> <p>0b0 SMC instructions are enabled at EL3, EL2 and EL1.</p> <p>0b1 SMC instructions are UNDEFINED.</p> <p>———— <b>Note</b> ————</p> <p>SMC instructions are always UNDEFINED at EL0. Any resulting exception is taken from the current Exception level to the current Exception level.</p> <p>If <a href="#">HCR_EL2.TSC</a> or <a href="#">HCR.TSC</a> traps attempted EL1 execution of SMC instructions to EL2, that trap has priority over this disable.</p> <p>—————</p> <p>The reset behavior of this field is:</p> <ul style="list-style-type: none"> <li>On a Warm reset, this field resets to an architecturally UNKNOWN value.</li> </ul> <p>Arm Architecture Reference Manual for A-Profile Architecture at D19-6959.</p> <p>The <i>Secure Monitor Call</i> (SMC) instruction provides software with a system call to EL3. When executing at a privileged Exception level, SMC instructions generates exceptions. For more information, see <a href="#">Secure Monitor Call (SMC) exception on page G1-9811</a> and <a href="#">SMC on page F5-8734</a>.</p> <p>Figure G1-1 shows that when EL3 is using AArch32, the Exception levels and modes available in each Security state are as follows:</p> <table> <tr> <td data-bbox="709 1190 840 1214"><b>Secure state</b></td><td></td></tr> <tr> <td>EL0</td><td>User mode.</td></tr> <tr> <td>EL3</td><td>Any mode that is available in Secure state, other than User mode.</td></tr> </table> <p>Arm Architecture Reference Manual for A-Profile Architecture at G1-9748-49.</p>	<b>Secure state</b>		EL0	User mode.	EL3	Any mode that is available in Secure state, other than User mode.
<b>Secure state</b>							
EL0	User mode.						
EL3	Any mode that is available in Secure state, other than User mode.						

Claim 1	Identification
<p>[1(C)] (2) processing the request based on the access rights associated with the software program if the computer system is not operating in the protected mode of operation.</p>	<p>If the computer system is not operating in the protected mode of operation (e.g., SMD set to 0), then the request is processed based on access rights associated with the software program.</p> <div data-bbox="596 375 1411 771" style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>The ARM Architecture Reference Manual uses the terms Secure and Non-secure to refer to system security states. A Non-secure state does not automatically mean security vulnerability, but rather normal operation and is therefore the same as the Normal world. Typically, there is a master and slave relationship between Non-secure and Secure worlds. Code in the Secure world is only executed when the OS permits Secure world execution through a mechanism that is initiated by the Secure Monitor Call (SMC) instruction.</p> <p><b>Note</b></p> <p>The use of the word world is used to describe not just the Execution state, but also all memory and peripherals that are accessible in that state. Non-secure memory and functions are also accessible to the Secure world.</p> <p>The role of the Secure monitor is to provide a gatekeeper which manages the switches between the Secure and Non-secure worlds. In most designs its functionality is similar to a traditional operating system context switch, ensuring that state of the world that the core is leaving is safely saved, and the state of the world the processor is switching to is correctly restored.</p> </div> <p>Security in an ARMv8-A System at 5</p>